

Amendments To The Claims

The listing of claims presented below will replace all prior versions, and listings, of claims in the application.

Listing of claims:

1. (Currently amended) A nuclear power plant (NPP) low-temperature NPP spent fuel reactor core comprising: ~~wherein core comprises:~~

~~fuel assembly-~~ a plurality of NPP spent reactor fuel assemblies;

upper and lower core grid plates;

a plurality of control rod rods and corresponding drive mechanisms, said control rods extending through said upper and lower core grid plates;

the NPP spent reactor fuel assemblies are fixed through the upper and lower core grid plates; being located between said upper and lower core grid plates;

each of the control rods being the control rod is inserted from the upper top of the reactor core into a the lattice made-up formed of the upper and lower core grid plates and between the said NPP spent reactor fuel assemblies;

the top of control rod is connected with its drive mechanism upper end of each control rod being connected with its corresponding drive mechanism;

the reactor core being is located in a the core vessel, where there are coolant inlet and output nozzles, connected with each other through tube and heat exchanger, located under a core pool, said core pool being provided with coolant inlet and outlet nozzles, which are connected through pipes with a heat exchanger;

wherein the said reactor is filled by NPP NPP spent reactor fuel is used as nuclear fuel and wherein light water is used as coolant and moderator in the

reactor.

2. (Currently amended) The ~~low-temperature~~ NPP spent fuel reactor according to claim 1, wherein on the top of the core pool ~~there is~~ are the provided at least one of: a sealing cover ~~[[and/or]]~~ and an the airtight gas shield. ~~to constitute at least one gas shield.~~
3. (Currently amended) The ~~low-temperature~~ NPP spent fuel reactor according to claim 1, wherein a pressurizer or a large pool is connected with the coolant inlet nozzle to improve ~~[[the]]~~ static pressure and maintain ~~[[the]]~~ pressure at the core outlet.
4. (Currently amended) The ~~low-temperature~~ NPP spent fuel reactor according to claim 1, wherein ~~within~~ the core pool is coupled to ~~there is~~ an underwater handling canal which is connected with a spent fuel storage pond. ~~and replaces addition of reloading water layer.~~
5. (Currently amended) The ~~low-temperature~~ NPP spent fuel reactor according to claim 1, further including a wherein the residual heat removal system cooler in the spent fuel storage pond. ~~and the the electromagnetic valve on the connection tube constitute the a passive residual heat removal system.~~